CGA

Compressed Gas Association

The Standard For Safety Since 1913

CGA V-15—2016

USE OF RESIDUAL PRESSURE VALVES

FIRST EDITION

PREFACE

As part of a program of harmonization of industry standards, the Compressed Gas Association (CGA) has issued CGA V-15, *Use of Residual Pressure Valves*, jointly produced by members of the International Harmonization Council and originally published by the European Industrial Gases Association (EIGA) as EIGA Doc 64, *Use of Residual Pressure Valves*.

This publication is intended as an international harmonized standard for the worldwide use and application of all members of the Asia Industrial Gases Association (AIGA), Compressed Gas Association (CGA), European Industrial Gases Association (EIGA), and Japan Industrial and Medical Gases Association (JIMGA). Each association's technical content is identical, except for regional regulatory requirements and minor changes in formatting and spelling.

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1 Introduction

Cylinder valves that retain a residual positive pressure in a gas cylinder and some types of devices that prevent backflow of fluid by means of a nonreturn device, commonly referred to as residual pressure valves (RPV), have been available for many years. Important benefits of RPVs include preventing moisture ingress and contamination, which reduce the potential for internal cylinder corrosion. Additional benefits include productivity improvements in the cylinder fill operation, avoiding internal cylinder contamination that could create hazardous situations, and reducing cylinder maintenance.

In the past, industry relied on users not to allow backflow into cylinders. Fillers typically relied on prefill inspection procedures to identify potentially contaminated cylinders returned from customers. Despite these measures, incidents caused by backflow of contaminants into cylinders have occurred, which highlight the potential benefit from usage of RPVs.

The use of RPVs generally requires a special fill connector for filling, evacuation, or both. The dimensions of the fill connector need to match certain critical dimensions of the valve outlet.

2 Scope and purpose

2.1 Scope

This publication is intended for use by the compressed gas industry and provides guidelines for the use of RPVs. This publication does not describe any design qualification tests of RPVs.

2.2 Purpose

The purpose of this publication is to give guidance on the selection, operation, maintenance, and installation of these valves, so common practices are established across the gas industry and these valves are beneficial to both the end user and filler of gas cylinders.

3 Definitions

For the purpose of this publication, the following definitions apply.

3.1 Publication terminology

3.1.1 Shall
Indicates that the procedure is mandatory. It is used wherever the criterion for conformance to specific recommendations allows no deviation.

3.1.2 Should
Indicates that a procedure is recommended.

3.1.3 May
Indicates that the procedure is optional.

3.1.4 Will
Is used only to indicate the future, not a degree of requirement.

3.1.5 Can
Indicates a possibility or ability.